COUNTING ROOM TECHNICIAN
JOB PERFORMANCE MEASURE

TASK CODE: CRT-B06

TASK: Repair the Alpha Spectroscopy System

NAME: _____ **SSN**: _____

REFERENCES:

1. Canberra Model 7401/7401VR/7404 Quad Alpha Spectrometer User's Manual

TERMINAL OBJECTIVE:

Given the alpha spectroscopy system will not calibrate or is not operating correctly, repair the alpha spectroscopy system.

CONSEQUENCES OF INADEQUATE PERFORMANCE:

Improper analysis results
Equipment damage

HAZARDS (PERSONNEL/EQUIPMENT STATUS):

None

PRE-REQUISITE TRAINING/ TASK COMPLETION:

1. CF .00 Series
2. CRT-B03, Calibrate the Alpha Spectroscopy System

TOOLS/EQUIPMENT (MATERIALS REQUIRED):

1. Spare components
2. Spare cables and connectors
3. Service Contract
4. System Logbook

Instructions to Trainee: You shall acquire the necessary references and equipment, and complete all required documentation. Knowledge requirements shall be completed with 80% or greater accuracy. Critical step performance shall be completed with 100% accuracy.

Instructions to JPM Evaluator: The trainee is to perform the terminal objective, without assistance, on the job site. Provide clarification of requirements if requested by the trainee. You are encouraged to ask relevant questions to verify trainee understanding. If the trainee fails this JPM, clearly document the reason for failure and forward to the trainee's manager. Successful completion of this JPM shall be recorded on the trainee's qualification card.

KNOWLEDGE REQUIREMENTS:

Reference	Knowledge Requirement	Pass/Fail
1	State the reasons for troubleshooting a counting system.	
1	State the limitations and restrictions associated with the service contract.	
1	Discuss the indications of a problem with the counting system electronics.	
1	Discuss the indications of a problem with the counting system detector.	
1	Describe the effects of a bad cable or connector.	
1	Describe the effects of improper system vacuum.	
1	Describe the possible indications of a problem with an electronic component.	
N/A	Describe the effect on a counting system if power is lost during operations.	
1	State what actions would invalidate a current counting system calibration.	
1	Describe the types of information that would be communicated to the service representative.	
N/A	Discuss how a counting system is known to be repaired.	
1	State the implications of a dirty alpha detector.	
N/A	Discuss how to verify power is available to a counting system.	

PERFORMANCE REQUIREMENTS:

Reference	Performance Requirement	Pass/Fail
N/A	Verify power is available to the counting system.#	

1	Verify correct switch positions for the desired counting application.#	
Reference	Performance Requirement	Pass/Fail
N/A	Perform a visual inspection of the cable and connectors.#	
N/A	Invalidate the current counting system calibration.#	
N/A	Change out a cable and connectors.#	
1	Verify counting system components are configured correctly.#	
1	Perform a visual inspection of the internal counting system components.#	
1	Change out a counting system component.#	
1	Change out a counting detector.#	
N/A	Coordinate with the service representative troubleshooting activities.#	
N/A	Document all actions taken in the system logbook.#	

# indicates a critical step

FINAL EVALUATION: PASS FAIL

COMMENTS:

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EVALUATOR SIGNATURE: _____ **DATE**:_____

TRAINEE SIGNATURE: _____ **DATE**:_____

MANAGER SIGNATURE: _____ **DATE**:_____